



Note From the Director: 2013 Year in Review

By Luke Terry, Director, 785-486-2601 x1

2013 was another busy and productive year for the Kickapoo Environmental Office. In late 2012, 4 new staff members joined the department resulting in two new environmental programs: Non-Point Source Protection and Wetlands Program Development. Both of these programs directly relate to the understanding and protection of surface water. As you all know, the Tribe's water intake lies on the Delaware River so protection of the source water is of utmost importance for the Department and Tribe.

Also in 2013, the department led the Community Garden establishment. While much improvement is still yet to be made in coming years, this project can be very beneficial to the Tribal Members and Tribal Departments who received fresh produce. This spring, a 30' x 48' green house will be installed at the Community Garden site. The green house will extend the growing season to offer produce for a longer period of time. We also plan to install a "Welcome Sign" at the Community Garden to post current gardening news.

As each year ends and another begins, one can't think about the successes and challenges that have been overcome and those that still remain. I've often considered professionals who work in the environmental and natural resources field to have never ending jobs. There's always something to manage, analyze, or discover about this endless world we live in and around.

As always, if you would like additional information or have specific items to discuss, please let me know. Luke Terry, Kickapoo Environmental Director: 785-486-2601 extension 1 or luke.terry@ktik-nsn.gov.

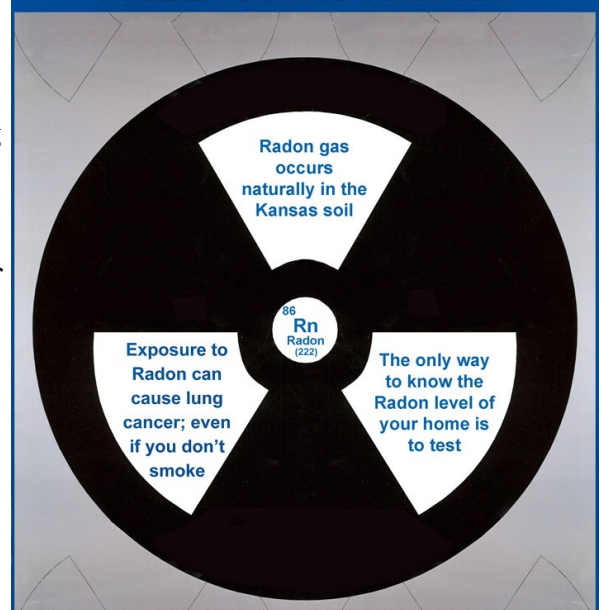
Radon: Silent But Deadly

By Scott Weir, Air Quality Coordinator, 785-486-2601 x3

Radon is an odorless, tasteless, colorless, radioactive gas which occurs naturally from the atomic decay of uranium in soil. Because it is a gas, it can pass through the soil under and around your home, entering through cracks and holes in the foundation. Radon is the most common cause of lung cancer in non-smokers, causing about 21,000 deaths each year. The risk of developing lung cancer from radon increases with the level of radon and length of exposure, and it actually increases the risk for smokers.

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FREE Radon Test Kit





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The U.S. Surgeon General, the American Lung Association, the American Medical Association, and the U.S. EPA recognize radon as a serious health risk. They have all advised that every home should be tested.

The potential for significant levels of radon in homes in northeast Kansas is high. The U.S. EPA's recommended action level for radon is 4.0 picoCuries per Liter (pCi/L). The average for Kansas, based on measurements in more than 47,000 homes, is 4.8 pCi/L. This means that many homes should have a radon removal system installed. Such a system involves installing a pipe running from a location under the slab or basement floor to a point above the roofline. Most systems include a fan which runs constantly to move air from the soil under a house to the outdoor air, which contains low levels of radon (0.2 to 1.0 pCi/L). The radon breaks down into other elements – eventually harmless ones – in several days, so the levels in the outdoor air remain low. The cost of a typical radon removal system is between \$800 and \$2,500.

Unlike most other air pollutants, radon can occur at high levels in individual homes. Homeowners should be proactive, taking action themselves to reduce the risk to their families' health.

The Kickapoo Environmental Office and the Kickapoo Housing Authority are currently offering free radon testing for interested households. This offer will expire at the end of February. Any one over the age of 18 who would like to have a free radon test should contact Scott Weir, Air Quality Coordinator, at 785.486.2601 ext. 2, or by e-mail at scott.weir@ktik-nsn.gov.

The Bees Just Can't Catch a Break

By Mike Kelley, Brownfields Coordinator, 785-486-2601 x

As you may have heard in the news or in previous issues of the Green Clan, there has been a noticeable drop in the population of bees. The loss in some parts of the United States is upwards to 1/3rd of the total bee population. Since bees are needed for the pollination of many food crops, this is a serious threat to everyone's food supply.



There is now even more bad news for bees, this time coming from the Royal Holloway University of London. According to their recently published study, when bees are exposed to pyrethroid pesticides (a common household and garden pesticide) the result is that newly hatched bees grow to a significantly smaller size.

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The Bees Just Can't Catch a Break

By Mike Kelley, Brownfields Coordinator, 785-486-2601 x6

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One of the researchers on this project, Gemma Baron, explains why this is an issue: "We already know that larger bumblebees are more effective at foraging. Our result, revealing that this pesticide causes bees to hatch out at a smaller size, is of concern as the size of workers produced in the field is likely to be a key component of colony success, with smaller bees being less efficient at collecting nectar and pollen from flowers."

Another of the researchers, Mark Brown, states: "Bumblebees are essential to our food chain so it's critical we understand how wild bees might be impacted by the chemicals we are putting into the environment. We know we have to protect plants from insect damage but we need to find a balance and ensure we are not harming our bees in the process." The full findings are published in the *Journal of Applied Ecology*.

As individuals in the community, it is important that we are all aware of the issues regarding chemical pesticides. With the spring gardening season growing ever closer, now is the time to start asking questions about safe pest control. If you have any questions or concerns about pesticide usage, contact the Kickapoo Environmental Office. We'll be happy to help.

Gemma L. Baron, Nigel E. Raine, Mark J. F. Brown. **Impact of chronic exposure to a pyrethroid pesticide on bumblebees and interactions with a trypanosome parasite.** *Journal of Applied Ecology*, 2014

The Underdogs of the Ecosystem

By Matt Bosworth, Wetlands Coordinator, 486-2601 x5

Have you ever noticed how news articles related to conservation, endangered species, and science in general focus on the flashy animals that everyone recognizes and loves? Think: pandas, dolphins, whales, tigers, and wolves. Of course, these are the species people are most concerned about, but there are many plants, and animals that are often forgotten.

These forgotten groups are those generally disliked or even hated. Think: mosquitoes, spiders, snakes, cockroaches, and bacteria. Anytime they are featured in a news article it is almost always in a negative light. But, let's take a look at one of these awesome creatures to get a different understanding of the importance and the role that these disliked groups play in the grand scheme of the world.

Mosquitoes----those annoying little buggers that buzz around your ear and make you itch all summer. Let's imagine the world without a single mosquito. First, it would be much quieter during the warm months, because mosquitoes are a major food source for birds, which could mean bird populations would likely decline without them, which would mean fewer bird songs. It's estimated that migratory birds decrease in population by 50% without those pesky bugs flying around. What would happen when you visited your favorite fishing hole? Mosquitoes make up a large portion of the biomass in the underwater world our favorite fish live in. Many of the minnows and insects that eventually feed the bass, crappie, and catfish would be hard pressed to scrape by a living without plentiful mosquito larvae and eggs to eat. Lastly, a lack of mosquitoes would probably have an impact on plants. Male mosquitoes do not bite flesh; In fact they feed only on nectar from flowers. Delicious blueberries and cranberries rely, at least partly, on mosquitoes to transfer genetic material around to produce fruit. A world without mosquitoes would mean fewer birds, smaller and fewer fish, and fewer berries and fruits.



Even the creatures that are disliked play huge roles in the world's life cycles. So when you're at a barbecue this summer and one of those pest lands on your arm, as you reflexively smack it, remember how important they have been to the ecosystem.



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Working Together for a Better Community!

I am offering this poem to you,
since I have nothing else to give.
Keep it like a warm coat
when winter comes to cover you,
or like a pair of thick socks
the cold cannot bite through,

I love you,

I have nothing else to give you,
so it is a pot full of yellow corn
to warm your belly in winter,
it is a scarf for your head, to wear
over your hair, to tie up around your face,

I love you,



——Jimmy Santiago Baca, excerpt from “I Am Offering this Poem”
originally published in *Immigrant in Our Own Land and Selected Early Poems*